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ABSTRACT

The performance and experiences of black and white college students from 30 colleges were compared. The sample consisted of 4,094 students and 706 faculty members from large white universities, regional white state universities, large white private universities, historically state-supported black universities, and historically black private universities. The Student Opinion Survey was administered to determine personal, academic, demographic, and attitudinal data. The performance level of white students as measured by progression rate and college grade point average was significantly higher than that of black students. It was found that, to some extent, the racial differences in progression rate are likely attributable to differences between the two races in a variety of personal and attitudinal characteristics, such as high school preparation, financial need, Scholastic Aptitude Test scores, the level of interfering problems, and feelings of racial discrimination. Faculty attitudes also seemed to influence student progression rates. Personal, institutional, and faculty influences also affected grade point average. High faculty contact with students and non-traditional teaching style were significant contributors to high coll grades. (SW)

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COMPARING AND PREDICTING THE COLLEGE PERFORMANCE OF BLACK AND WHITE STUDENTS

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This paper was presented at the Annual Meeting of the Association for the Study of Higher Education held at the Conrad Hilton Hotel in Chicago, Illinois, March 12-14, 1984. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

COMPARING AND PREDICTING THE COLLEGE PERFORMANCE OF BLACK AND WHITE STUDENTS

As colleges and universities make progress toward numerically desegregating their enrollments, it becomes increasingly important to assess the academic success of students under these desegregated conditions. The goal of equal access is established as an important goal in desegregation. Of equal importance, although less often analyzed, is equality in the college performance and experience for students of all races. The analysis of the quality of performance of black and white students is the topic of this paper. Two purposes are to be served by this paper. The first purpose is to provide a comparison of the overall performance as well as a comparison of the personal and attitudinal/behavioral characteristics of black and white college students to illustrate the challenges to qualitative equality--thus providing a qualitative status report. The second purpose is to find the probable causes for the different performance levels of black and white college students. (College performance in this study refers to progression rates and grade point averages.)

During the 1960's and 1970's there was a good deal of debate over the predictors of success in college for black students and white students. The debate was centered around the admissions' policies of traditionally white universities which were obstacles for many black students seeking to enter. On one side of the issue were advocates in favor of increasing black enrollment recommending the use of non-traditional predictors of college success. This view was supported by several researchers who found that the predictors for success of black students were different from those used in predicting success for white students. In 1964, Kenneth Clark and Lawrence Plotkin discovered that black students who entered predominantly white universities performed well due to their motivation and goals despite any other pre-collegiate or entrance examination scores indices. Lewis Beasley (1974) found that biographical characteristics of students had greater validity in predicting black students' grade point averages and retention rates. The same conclusions were reached in earlier studies by Anastasi (1960) and Aiken (1964). Still other researchers recommended such measures as educational aspiration, motivation, precollegiate preparation and experiences, and social and academic support as alternative admission criteria to the traditional standardized examinations, high school rank and high school grade point average (Sedlecek and Brooks, 1973).

Counter arguments were advanced by researchers but practically all focused upon showing the predictive validity of standardized entrance examinations for

both black and white students rather than exploring the contributions of other variables. Studies conducted by Stanley and Porter (1962), Munday (1965), McKelpein (1965) and Scott (1938) found no significant differences in the value of such standardized examinations in predicting the college grade point averages and retention of black compared to white students; therefore, the use of traditional entrance requirements were advanced as appropriate to use for predicting the success of students of both races.

Since the major focus of earlier studies was upon numerical enrollment growth and admissions, perhaps it is acceptable that studies of the success of black and white students concentrated most heavily upon students' entrance examinations and occasionally upon their biographical characteristics as the predictor variables. While the need for greater black enrollment remains important to the desegregation process, the quality of the college experience of existing students as well as the quality of their performance must become a focal point of research on this topic. Moreover, research which predicts the success of college students must take into consideration not only sutdents' personal and intellectual characteristics, but must also include college environmental characteristics such as students' attitudes and behaviors, faculty attitudes and behaviors, and other institutional characteristics. Research on student retention has indicated that college environmental and institutional factors are important considerations in predicting students' college performance (Astin, 1975, Tinto, 1975, and Pascarella and Terrinzina, 1977 and 1980). This means that a great deal more than the biographical and entrance examination factors need to be taken into account when predicting students' college performance.

This paper focuses upon comparing the college performance and experiences of black and white students and predicting the performance (progression rate and college grade point average) using a variety of student, faculty and institutional characteristics. Through these analyses, it is the hope of the writers that the factors which will bring equality and performance can be identified.

Study Methodology and Procedures. The two samples for this study include 4094 students and 706 faculty members randomly selected from thirty universities located in ten southern and southern border states. The student sample was randomly selected from the sophomore, junior and senior classes of the thirty universities. The faculty sample was randomly selected from the total faculty at the thirty universities.

The thirty universities are equally divided into the following categories; (1) large white state universities (flagship); (2) regional white state universities; (3) historically black state supported universities; (4) white large private universities; and (5) historically black private universities.

The original student sample was stratified to select fifty each of white sophomores, juniors and seniors, and fifty each of black sophomores, juniors and seniors totaling 300 students from each campus for a grand total of 9000 students. The sample was reduced in size, because on campuses where the minority racial group was less than fifty in a given class, the entire population of that race and class level was selected. These procedures yielded a total of 7,428 students. Each of these students received a survey instrument entitled the Student Opinion Survey which was designed to collect various personal, academic, demographic and attitudinal data. Of the 7,428 mailed survey instruments, 4,094 (65.8%) were returned after one follow-up.

The faculty sample was also randomly selected from the thirty universities. The faculty sample was stratified to include ten faculty from the minority racial group and twenty of the majority racial group on each of the campuses. In cases where the number of minority faculty was fewer than ten, the entire minority faculty was selected. This sampling procedure resulted in an original sample size of 894 faculty. These faculty members each received an instrument entitled the Faculty Opinion Survey which was designed to obtain personal, and attitudinal/behavioral characteristics of faculty at each of the universities. Of the original 894 surveys mailed to faculty, 706 (79%) were returned and included in this study.

The Dependent Variables. The two dependent variables in this study are progression rate and college grade point average. Progression rate is defined as the average number of credit hours students successfully complete per term of enrollment. This variable measures the rate of progress that students make toward achieving an undergraduate degree. College grade point average is defined as the cumulative grade point average or simply the sum of quality points earned divided by the number of credit hours attempted.

Description of the Independent Variables. The predictive value of thirty-one student, faculty and institutional characteristics have with progression rate and college grade point average at the thirty universities combined, are analyzed in this paper. The student variables include demographic characteristics, precollege academic and race relation characteristics, and in-college attitudinal/behavioral characteristics. The data for the student variables were collected using a survey instrument entitled the Student Opinion Survey which is a 109 item questionnaire designed and validated by the THEC staff. The seven attitudinal/behavioral characteristics were developed from a computerized (SAS) factor analysis which included 77 items from the survey instrument. Seven oblique rotated factors were selected for the inclusion in this study using principal factoring with iteration. The twenty-three student variables are:

1. Composite SAT score
2. Socioeconomic status
3. Race
4. Sex
5. Age
6. High school grade point average
7. Marital status
8. Type of high school attended
9. Number of hours spent working on a job while in college
10. Where a student lives while in college
11. Racial minority status
12. Whether a transfer student
13. Number of miles between college and permanent home
14. Fit between racial composition of high school and racial compositon of college
15. Highest expected degree
16. Whether worked while in school
17. Academic integration scale
18. Financial need scale
19. Commitment to the institution scale
20. Academic motivation scale
21. Feelings of discrimination scale
22. Social integration scale
23. Interfering problems scale

The faculty variables include five attitudinal/behavioral characteristics of faculty at the thirty universities. These faculty variables were taken from the Faculty Opinion Survey which was also designed and validated by the THEC staff. The five attitudinal/behavioral characteristics are the result of a factor analysis of the faculty survey. These five factors were selected from among eleven developed by the same method used by the student factor analysis. These five factors are:

1. Significant contact with students outside the classroom scale
2. Satisfaction with institution scale
3. Conservative teaching style scale
4. Feelings that the institution is racially discriminating scale
5. Concern for student development scale

Two institutional characteristics are also included in the analyses both of which were obtained from data reported by each of the thirty universities on a separate survey entitled the Institutional Data Questionnaire. These two

factors are:

1. Predominant race of university
2. Total enrollment

A computer file was created which includes one record for each student in the sample. The factor scores for the faculty as well as the two institutional variables were added to the student record. Each student's record includes the average faculty scale score for the faculty on his/her campus for each of the five factors. The two institutional characteristic data were also added to the file.

Method of Analysis. This paper includes three sets of data analyses. First, the student characteristics are compared by race to show the overall differences and similarities between black and white college students. This includes comparisons of both students' dependent and independent variables. Students' T-test is used to compare black and white students on the interval level variables. Second, attitudinal/behavioral characteristics for faculty at the five universities are compared. Chi-square analysis is used to compare black and white students on the categorical variables. Duncans Multiple Range Test is used to illustrate the overall differences among faculty of the five types of universities. The comparison of faculty at the five type universities is importatn in this study because faculty characteristics are used as predictors in the regression analyses. Finally, two types of regression analyses are performed for each of the dependent variables to illustrate the student, faculty and institutional characteristics that are predictors of students' progression rates and college grade point averages. The first regression is a full model of all variables entered into the regression equation concurrently to obtain the independent effect of each predictor with all the remaining main effect variables statistically controlled. For the second regression, the resulting partial t-values are eliminated if they do not contribute significantly at the .05 level. In the second regression analysis, setwise and stepwise inclusion techniques are combined to isolate interaction terms that add significantly (.05 level) to the reduced model obtained through the first regression procedure. All significant main effect variables from the first regression are entered concurrently on step one of the second regression. Cross-product interaction terms between race and each of the main effects are then allowed to enter the model in stepwise fashion on subsequent steps, if they add to the explanatory power of the equation at least the .05 level of significance. The result is partial regression coefficients and t-values representing the independent contribution of each significant main effect and interaction term.

Discussion of Findings. Table 1 illustrates the comparison of black and white students on the twelve discrete independent variables using Chi-Square Test of Independence which shows a significatn difference between race and categorical variables. Table 2 illustrates the comparison between black and white college students on the interval level independent variables using Students' t-tests to illustrate the significant racial differences. Table 1 reveals significant differences between black and white students in the sample on each of the discrete variables at the .001 level of significance. First of all, they differ in the way they cover their educational expenses. Black students are less likely than white students to cover their expenses with funds obtained from parents and relatives and are more likely to cover a greater portion through grants, scholarships and loans. Black students cover significantly smaller amount of their college expenses through employment while attending college or from summer employment. Significantly more white students than black students work while school is in session (42.8% compared to 34.3%), and the black students who do work while attending college are more likely to work on campus than white students.

Demographically, black students are more likely to be female than white students (62.7% compared to 49.7%) and are also more likely to be single (93.6% compared to 85%) than white students.

The remaining categorical comparisons reveal that black students are more likely than white students to live in campus housing, attend school full time as opposed to part-time, are less likely to be transfer students, have higher degree aspirations, are more likely to be in the racial minority group on campus, and more likely to have attended a public as compared to private high school.

Table 2 illustrates that black students and white students are significantly different in their performance on the two dependent variables of progression rates and college grade point averages. White students have a faster progression rate (15.3 credit hours per term compared to 14.4 credit hours per term) than black students and a higher grade point average (B as compared to C+).

Table 2 illustrates significant racial differences on all the interval level variables except age and academic motivation. In general, white students have significantly higher SAT scores, higher high school grade point averages, significantly greater academic integration, significantly greater commitment to their universities and higher socioeconomic status. Black students on the other hand, have greater social integration, yet greater financial need, significantly greater feelings of discrimination and more interfering problems.

Table 2 illustrates the average scale scores for the faculty attitudinal/behavioral characteristics at each of the five types of universities. Analysis of variance and Duncans Multiple Range Test are applied to illustrate the

TABLE 1

CHI-SQUARE COMPARISONS OF BLACK AND WHITE STUDENTS

Dependent Variable	Percentage for White Students		Percentage for Black Students		Chi-Square	d.f.
50-100% of Finances Covered Through:	%	n	%	n		
Parents/relatives	50.7%	(924)	27.9%	(604)	257.44**	4
Grants	7.4	(121)	41.63	(885)	881.86**	4
Scholarships	7.5	(122)	10.8	(219)	26.33**	4
Loans	10.2	(169)	19.7	(406)	74.281**	4
Employment	14.3	(248)	12.7	(267)	42.18**	4
Work					106.39**	2
On-campus	25.8	(469)	41.4	(897)		
Off-campus	31.3	(568)	24.3	(526)		
Don't work	42.8	(777)	34.3	(742)		
Sex					69.12**	1
Female	49.7	(919)	62.7	(1368)		
Male	50.3	(930)	37.3	(813)		
Marital Status					81.49**	3
Single	85.0	(1556)	93.6	(2044)		
Married or living together	15.0	(275)	6.4	(140)		
Where live					150.78**	2
Campus student housing	54.0	(1005)	65.9	(1444)		
Private housing	46.0	(856)	34.1	(748)		
Attendance					24.98**	1
Full time	92.0	(1707)	95.7	(2100)		
Part time	8.0	(149)	4.3	(94)		
Transfer Status					39.12**	1
Never taken courses elsewhere	54.9	(1021)	64.5	(1413)		
Taken courses elsewhere	45.1	(840)	35.5	(777)		
Degree Aspirations					102.19**	5
Baccalaureate or less	34.8	(647)	21.6	(473)		
More than a baccalaureate	65.2	(1211)	78.3	(1712)		
Minority Status					801.66**	1
Majority group	87.7	(1646)	45.3	(1005)		
Minority group	12.3	(230)	54.7	(1213)		
Type of High School					36.43**	1
Public	83.4	(1544)	89.8	(1972)		
Private	16.6	(307)	10.2	(223)		

**Significant at .001 level.

TABLE 2

STUDENT'S T-TESTS COMPARING BLACK AND WHITE COLLEGE STUDENTS

Dependent Variable	Mean for White Students	s.d.	Mean for Black Students	s.d.	t	d.f.
Progression Rate	15.3	4.6	14.4	4.1	6.06**	3578
College Grade Point Average	4.2[1](B)	1.9	5.5[1] (B- to C+)	1.8	-21.96**	3805
Composite SAT Score	1056.8	178.6	853.2	156.6	38.44**	3760
High School Grade Point Average	2.9[1](B+)	1.7	3.5[1] (B to B+)	1.6	-10.55**	3882
Academic Integration	.163	.943	.021	1.044	3.81**	2822
Financial Need	-.120	.801	.289	.757	-13.98**	2807
Commitment to the Institution	-.142	.950	-.386	.922	6.93**	2833
Academic Motivation	.042	.923	.028	.875	-.40	2808
Feelings of Discrimination	.015	.861	.647	1.275	-15.52**	2546
Social Integration	.032	.884	.295	.920	- 7.74**	2833
Interfering Problems	-.015	.806	.203	.901	-6.80**	2819
SES	.064	.845	-.897	1.000	27.69**	2788
Age	4.1[1](21)	2.0	4.0[1] (21)	1.8	1.18	3826

*Significant at .01 level of significance using two-tailed Student's t-test.
**Significant at .001 level of significance using two-tailed Student's t-test.

[1]Numbers refer to the mean category numbers. The values represented by those categories (as rounded off) are enclosed in parentheses.

TABLE 3

RELATIONSHIP BETWEEN TYPE OF UNIVERSITY AND FACULTY ATTITUDES AND BEHAVIORS

Scale	Analysis of Variance F(Model)	Duncan's Multiple Range Test (Means with same letter are not significantly different at alpha = .05) Grouping	Mean	Type of University
Contact	12.81**	A	.913	Black public
		B A	.594	Black private
		B C	.263	White regional public
		D C	.032	White large public
		D	-.218	White private
Satisfaction	11.16**	A	-.854	White private
		B	-.449	White large public
		B	-.395	White regional public
		C	.030	Black private
		D	.321	Black public
Style	3.79*	A	.050	White private
		B A	-.149	White large public
		B A	-.156	Black private
		B	-.297	White regional public
		C	-.581	Black public
Discrimination	2.27	A	.350	White large public
		B A	.129	White private
		B	-.046	White regional public
		B	-.070	Black public
		B	-.250	Black private
Development	5.31**	A	-.061	Black public
		A	.032	White regional public
		B A	.104	Black private
		B C	.377	White private
		C	.518	White large public

*Significant at .01 level (degrees of freedom = 4).
**Significant at .001 level (degrees of freedom = 4).

significant differences among faculty at the five types of universities. In general, Table 3 shows the faculty at black public unviersities and black private universities have significantly greater contact with students outside the classroom but are the least satisfied with their university, and have the least feelings of racial discrimination. On the other hand, faculty at white private and white large public universities have the greatest level of satisfaction, the least amount of contact with students outside the classroom and the greatest feelings that racial discrimination exists on their campuses. Faculty at white private, white large public and black private universities have the most conservative teaching styles while faculty at black public universities have the least traditional teaching styles. Faculty at black public, white regional and black private have the greatest concern for student development. Faculty at white private and white large public universities have the least concern for student development. The importance of these faculty characteristics, as with the student characteristics to students college performance, is illustrated through the regression analyses.

Table 4 illustrates the full model regression analysis for progression rate which includes all student, faculty and institutional variables. Table 5 illustrates the reduced model with interaction terms as a result excluding the non-significant main effect variables. Table 4 shows that several student, faculty and institutional characteristics are significant independent predictors of students' progression rates in college. In order of their relative importance Table 4 illustrates that the following eighteen characteristics predict the faster progression rates among college students: attending a larger university, being a younger student, having a faculty with high concern for student development, attending college a great distance from home, having a low commitment to ones' institution, having high high school grade point averages, having a faculty with low satisfaction with their university, having low financial need, having high social integration, working a low number of hours on a job while in college, having low contact with faculty outside the classrooms, having relatively high SAT scores, having high academic motivation, living in on-campus housing, attending a college with similar or same racial composition as ones' high school, having higher degree aspirations beyond a bachelors degree, having few interfering problems, and being married. Altogether, the full model of main effects explains 22.5% (R^2=.225) of the variance in students college progression rates.

TABLE 4

SUMMARY OF RESULTS FROM REGRESSION OF STUDENTS' PROGRESSION RATE ON STUDENT, FACULTY AND INSTITUTIONAL CHARACTERISTICS: FULL MODEL OF MAIN EFFECTS

Independent Variables	B[1]	Beta[2]	t
Student Characteristics			
SAT Score	.002	.074	2.98**
Socioeconomic Status	-.180	.040	-1.89
Race (0 = White, 1 = Black)	.287	.024	.68
Sex (0 = Female, 1 = Male)	.220	.027	1.42
Age	-.474	-.204	-8.69**
High School Grade Point Average	.268	.106	5.08**
Marital Status (0 = Single, 1 = Married, Living Together)	.593	.041	2.09*
Type of High School Attended (0 = Public, 1 = Private)	.083	.007	.38
# Hours Spent Working on a Job	-.227	-.079	-2.89**
Where Lived (0 = Private Home, Apartment, 1 = On-campus Housing)	.452	.056	2.68**
Racial Minority Status (0 = Majority Status, 1 = Minority Status)	-.842	-.048	-1.91
Transfer Student (0 = Yes, 1 = No)	.141	.017	.90
# Miles from Permanent Home	.358	.117	5.81**
Fit Between Racial Composition of High School and College (0 = Different, 1 = Alike)	.499	.418	2.15*
Fit Between Racial Composition of Home Neighborhood and College (0 = Different, 1 = Alike)	.076	.007	.29
Highest Expected Degree (0 = Bachelor's or Less, 1 = Master's or More)	.389	.046	2.41*
Whether Works While in School (0 = Yes, 1 = No)	-.024	-.003	-.11
Academic Integration	.088	.021	.87
Financial Need	-.399	-.083	-4.16**
Commitment to Institution	-.570	-.127	-5.02**
Academic Motivation	.269	.060	2.96**
Feelings of Discrimination	-.142	-.030	-1.31
Social Integration	.362	.080	3.76**
Interfering Problems	-.213	-.045	-2.16*
Faculty Characteristics			
Significant Contact with Students	-.842	-.076	-2.06*
Satisfaction with Institution	-.739	-.099	-2.70**
Conservative Teaching Style	.873	.058	1.96
Feeling that Institution is Discriminatory	-.202	-.015	-.70
Concern for Student Development	1.936	.184	5.29**
Institutional Characteristics			
Predominant Race (0 = White, 1 = Black)	.138	.010	.26
Total Enrollment	.00006	.259	7.90**
Constant	13.240		
F (Equation)		23.773**	
R^2		.225	

*Significant at .05 level (two-tailed).
**Significant at .01 level (two-tailed).

[1]Unstandardized regression coefficient.
[2]Standardized regression coefficient.

TABLE 5

SUMMARY OF RESULTS FROM REGRESSION OF STUDENTS' PROGRESSION RATE ON STUDENT, FACULTY AND INSTITUTIONAL CHARACTERISTICS: REDUCED MODEL OF SIGNIFICANT[1] MAIN EFFECTS AND INTERACTION TERMS[2]

Independent Variables	B[3]	Beta[4]	t
Student Characteristics			
SAT Score	.002	.071	3.13**
Age	-.494	-.210	-9.58**
High School Grade Point Average	.227	.089	4.45**
# Hours Spend Working on a Job	-.223	-.077	-3.99**
Where Lived (0 = Private Home, Apartment; 1 = On-campus Housing)	.475	.058	2.84**
Marital Status (0 = Single; 1 = Married, Living Together)	.591	.040	2.11*
# Miles from Permanent Home	.388	.125	6.34**
Fit Between Racial Composition of High School and College (0 = Different; 1 = Alike)	.533	.050	2.73**
Highest Expected Degree (0 = Bachelor's or Less; 1 = Master's or More)	.314	.037	1.98*
Financial Need	-.384	-.079	-4.20**
Commitment to Institution	-.418	-.092	-4.25**
Academic Motivation	.255	.056	2.89**
Social Integration	.290	.063	3.25**
Interfering Problems	-.240	-.050	-2.50*
Faculty Characteristics			
Significant Contact with Students	-.329	-.029	-1.09
Satisfaction with Institution	-.359	-.048	-1.66
Concern for Student Development	1.509	.142	5.27**
Institutional Characteristics			
Total Enrollment	.00005	.225	8.48**
Interaction Terms			
Race (0 = White) * Feelings of Discrimination	-.370	-.040	-2.24*
Constant	13.583		
F (Equation)		37.920**	
R^2		.217	

*Significant at .05 level (two-tailed).
**Significant at .01 level (two-tailed).

[1]Significant at .05 level or greater in full model of main effects (Table 34). Consequently, the Contact with Students and dissatisfaction scales are included because they were significant at the .05 level in the full model of main effects, even though they lose their significance in the reduced model with interaction terms.
[2]Only those interaction terms are included that add significantly (.05 level or greater) to the explanatory power of the reduced model of significant main effects.
[3]Unstandardized regression coefficient.
[4]Standardized regression coefficient.

Table 5 illustrates the reduced model which is the second phase of the regression analysis deleting variables that did not contribute significantly when the effects of the others were controlled. Interaction terms created by multiplying race by each of the main effect variables in Table 5 were then allowed to enter the model if they added to the explanatory power of the equation at the .05 level or greater. Table 5 shows that, with the exception of faculty contact with students and faculty satisfaction with their institution, all of the main effect variables that were significant in the full model retained their significance in the reduced model. Also, one interaction term enters the equation -- feelings of discrimination. The interaction term shows that while feelings of discrimination do not significantly effect the progression rates of white students (data = .030) they have a significant negative effect upon the progression of black students (data= -.070). The reduced model of main effects explains 21.7% of the variance in progression rates (R^2=.217).

Table 6 illustrates the full model regression equation for the predictors of college grade point average and Table 7 illustrates the reduced model which eliminates the nonsignificant effects from Table 6. Table 6 illustrates that 21 student, faculty and institutional characteristics are significant independent predictors of college grade point averages among college students. In order of their relative importance the following characteristics are associated with high college grade point average: having high academic motivation, having high high school grade point averages, having high academic integration in college, having a high SAT score, having low commitment to ones university, having high faculty contact with faculty outside the classroom, having few interfering problems, having high feelings of discrimination, having a faculty with non-traditional teaching styles, being in the racial majority on campus, being a white student, having low social integration, living in on-campus housing, having higher degree aspirations than a baccalaureate degree, having low financial need, attending a small university, attending a private high school, being female, attending college a great distance from ones permanent home, being a non-transfer student, and being married. This full model of main effects explains 42.5% of the variance in students college grade point average (R^2=.426).

Table 7 presents partial regression coefficients and t-values for the reduced model created by deleting nonsignificant main effects from the full

TABLE 6

SUMMARY OF RESULTS FROM REGRESSION OF COLLEGE GRADE POINT AVERAGE ON STUDENT, FACULTY AND INSTITUTIONAL CHARACTERISTICS: FULL MODEL OF MAIN EFFECTS

Independent Variables	B[1]	Beta[2]	t
Student Characteristics			
SAT Score	.002	.210	9.75**
Socioeconomic Status	.006	.003	.16
Race (0 = White, 1 = Black)	-.424	-.075	-2.42*
Sex (0 = Female, 1 = Male)	-.193	-.050	-3.00**
Age	.029	.026	1.30
High School Grade Point Average	.335	.275	15.31**
Marital Status (0 = Single, 1 = Married, Living Together)	.288	.041	2.44*
Type of High School Attended (0 = Public, 1 = Private)	.314	.055	3.48**
# Hours Spent Working on a Job	-.016	-.011	-.48
Where Lived (0 = Private Home, Apartment, 1 = On-campus Housing)	.261	.067	3.7**
Racial Minority Status (0 = Majority Status, 1 = Minority Status)	-.682	-.080	-3.73**
Transfer Student (0 = Yes, 1 = No)	-.166	-.042	-2.56*
# Miles from Permanent Home	.073	.049	2.86**
Fit Between Racial Composition of High School and College (0 = Different, 1 = Alike)	.053	.010	.53
Fit Between Racial Composition of Home Neighborhood and College (0 = Different, 1 = Alike)	.086	.016	.79
Highest Expected Degree (0 = Bachelor's or Less, 1 = Master's or More)	.268	.066	4.00**
Whether Works While in School (0 = Yes, 1 = No)	-.123	-.032	-1.41
Academic Integration	.444	.217	10.60**
Financial Need	-.151	-.065	-3.80**
Commitment to Institution	-.400	-.185	-8.49**
Academic Motivation	.699	.325	18.51**
Feelings of Discrimination	.206	.091	4.58**
Social Integration	-.151	-.069	-3.78**
Interfering Problems	.224	-.097	-5.44**
Faculty Characteristics			
Significant Contact with Students	.708	.133	4.17**
Satisfaction with Institution	.194	.054	1.70
Conservative Teaching Style	-.602	-.083	-3.26**
Feeling that Institution is Discriminatory	.209	.032	1.74
Concern for Student Development	-.208	-.041	-1.37
Institutional Characteristics			
Predominant Race (0 = White, 1 = Black)	-.408	-.064	-1.83
Total Enrollment	-.000006	-.057	-2.04*
Constant	-6.234		
F (Equation)		60.909**	
R^2		.426	

*Significant at .05 level (two-tailed).
**Significant at .01 level (two-tailed).

[1]Unstandardized regression coefficient.
[2]Standardized regression coefficient.

TABLE 7

SUMMARY OF RESULTS FROM REGRESSION OF COLLEGE GRADE POINT AVERAGE ON STUDENT, FACULTY AND INSTITUTIONAL CHARACTERISTICS: REDUCED MODEL OF SIGNIFICANT[1] MAIN EFFECTS AND INTERACTION TERMS[2]

Independent Variables	B[3]	B[4]	t
Student Characteristics			
SAT Score	.002	.218	10.73**
Race (0 = White, 1 = Black)	-.618	-.109	-4.78**
Sex (0 = Female, 1 = Male)	-.211	-.054	-3.42**
High School Grade Point Average	.339	.276	16.11**
Marital Status (0 = Single, 1 = Married, Living Together)	.313	.044	2.82**
Type of High School Attended (0 = Public, 1 = Private)	.283	.050	3.34**
Where Lived (0 = Private Home, Apartment, 1 = On-campus Housing)	.169	.043	2.61**
Racial Minority Status (0 = Majority Status, 1 = Minority Status)	-.705	-.083	-4.50**
Transfer Student (0 = Yes, 1 = No)	-.204	-.052	-3.40**
# Miles from Permanent Home	.059	.040	2.43*
Highest Expected Degree (0 = Bachelor's or Less, 1 = Master's or More)	.235	.057	3.66**
Academic Integration	.437	.211	-10.83**
Financial Need	-.120	-.051	-3.21**
Commitment to Institution	-.361	-.167	-8.01**
Academic Motivation	.708	.326	19.33**
Feelings of Discrimination	.251	.110	5.82**
Social Integration	-.183	-.084	-4.48**
Interfering Problems	-.267	-.116	-6.42**
Faculty Characteristics			
Significant Contact with Students	.431	.082	4.21**
Conservative Teaching Style	-.329	-.045	-2.37*
Institutional Characteristics			
Total Enrollment	-.000003	-.026	-1.39
Interaction Terms			
Race (0 = White) * Social Integration	.207	.039	2.27*
Race (0 = White) * Interfering Problems	.259	.043	2.66**
Constant	-6.159		
F (Equation)		87.879**	
R^2		.427	

*Significant at .05 level (two-tailed).
**Significant at .01 level (two-tailed).

[1]Significant at .05 level or greater in full model of main effects (Table 41). Consequently, Total Enrollment is included because it was significant at the .05 level in the full model of main effects, even though it loses its significance in the reduced model with interaction terms.
[2]Only those interaction terms are included that add significantly (.05 level or greater) to the explanatory power of the reduced model of significant main effects.
[3]Unstandardized regression coefficient.
[4]Standardized regression coefficient.

model and adding significant interactions to the resulting equation for college grade point average. Table 7 shows that only one main effect that was significant in the full model loses its significance in the reduced model with interaction terms and that is institutional enrollment. All the other main effects in the final model retain their significance at the .01 level. Two interaction terms enter the equation showing that social integration has a much smaller positive effect on the grade point averages of black students (data =.045) than white students (data=.084); and (2) interfering problems have a much smaller negative effect on grade point averages of black students (data= -.073) than white students (data = -.116). Altogether the independent variables in the reduced model explain 42.7% (R^2= .427) of the variance in the dependent variable college grade point average indicating that the reduced model is as effective as the full model in explaining college grade point average.

Conclusion. The performance level of white students as measured by progression rate and college grade point average is significantly higher than black students and the reasons for the inequality in each race's performance measures are different from the other. This study has shown that to some extent, the racial differences in progression rate are likely to be attributed to the differences between the two races in a variety of personal attitudinal characteristics the students possess such as high school preparation, financial need, SAT scores. the level of interfering problems, and feelings of racial discrimination, and faculty attitudes also have an influence upon students' progression rate. Particularly faculty with concern for student development, but low contact with students outside of class and low satisfaction with their university tend to contribute to faster progression rates. This may explain why progression rate is not considered a favorable measure of performance; at least not to faculty. One institutional factor - size of the institution is also a significant contribution to faster progression rates. With the exception of feelings of discrimination, which has a significant negative effect upon the progression rates of black students while having virtually no effect upon white students, the predictors for black and white student progression are generally the same. Although progression rate is not considered a high quality college performance measure, it should be considered more important as a desegregation performance measure because it represents the difference in the efficiency which black and white students perform in college.

The predictors of college grade point average also included student, faculty and institutional characteristics. Part of the reason for lower grade averages of black students may be to due to their lower high school preparation, lower college academic integration, lower SAT scores, being in the racial minority,

having higher financail need, and having a greater tendency to attend public high schools. Perhaps most important is the fact that being a black student in and of itself is a significant predictor of college grade point average. Such faculty characteristics as high contact with students and non-traditional teaching style are significant contributors to high college grades. Attending a smaller university is also associated with higher grades.

The predictors for black and white students' college grade point averages are not different. However, while low social integration predicts higher grades, it is a weaker predictor for black students than white students. The same is true for interfering problems wherein few interfering problems predict higher grades, it is a weaker predictor for black students than white students. Thus, black students appear to be able to need somewhat greater social integration than white students and appear to handle somewhat more interfering problems without negative impact upon their grades. Other factors such as racial segregation, Anglican biased curricula, as well as the effectiveness of white faculty to teach black college students are topics of future studies to further explain the lower performance of black students.

This study illustrates some of the qualitative inequality of the college experiences for black and white college students and indicates some of the significant factors to be addressed by educators and policy-makers to bring about greater equality in the performance.

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